9. (New) A method as claimed in claim 1 comprising the step of identifying elements of the network where traffic between said user and said customers is concentrated and selecting one of the identified elements where traffic is concentrated as one of said end elements of the express route.

In the Abstract

A replacement Abstract is provided on the attached separate page.

Remarks

Applicant files a replacement abstract which is less than 150 words and uses clear and concise language.

Applicant notes the objection to the drawings as being informal, and will file formal drawings when the application is allowed.

Examiner has rejected claims 1-8 under 35 USC 102(e) as being anticipated by Bertin et al. Reconsideration is requested.

Bertin addresses the problem of routing data packets across a network for those users who are just expecting a "best effort" service. In providing support for her rejection, the Examiner has pointed to various passages between column 5 and column 7 of Bertin. These passages have been pulled together from a collage of

different prior art techniques (automatic network routing and label swapping at column 5) as well as the invention taught by Bertin. Even in view of this, applicant believes that these passages do not anticipate the invention, particularly as defined by the amended claims.

Bertin does not teach anything which is equivalent of the step in claim 1 of "monitoring said network to determine an actual, or expected, congestion point". Bertin does not teach how to maintain an express route which bypasses the congestion point. Finally, Bertin does not teach how to divert specific packets along the express route, i.e. packets which are either from a predetermined network user or destined for that predetermined network user.

In response to some of the Examiner's comments:

The passage at column 6 lines 23-25 simply mentions a packet switching network with nodes and transmission links and gives no mention of "an express route";

The Examiner has made a sweeping, and incorrect, assumption as to why the passage at column 5 lines 15-19 shows the feature of "an element arranged to identify data packets originating from said user and destined for a said customer". The sole basis for the Examiner's assumption is a short summary of a prior art technique of automatic network routing, where a source node is responsible for

calculating the route that a packet must take through the network and provides each packet with a full routing field listing the chosen links. There is no suggestion in Bertin that an element identities as data packets originating from a user or that an element uses this information to divert packets along an express route, neither is there basis for the assumption that "routing is bi-directional so it could be from user to customer or customer to user";

The passage at column 5 lines 42-45 is part of a summary of a different prior art technique called label swapping. There is no suggestion, in this very short summary, that a reserved bandwidth path is set up in response to determining a congestion point in the network, or that the reserved bandwidth path actually avoids a congestion point.

Thus, claim 1 is submitted to be allowable over Berlin. Claims 2-6 are allowable at least by virtue of their dependency on claim 1.

Claim 7 now explicitly recites the express route. It should also be noted that claim 7 requires the filter means to identify data packets having a source address corresponding to a predetermined user and to divert identified packets along the express route. As noted previously, Bertin does not teach a network element which operates in this manner. In particular, Bertin does not teach how an element routes packets along an express route according to the source address corresponding to a predetermined user. Examiner has highlighted another passage

(column 8 lines 50-54) to support her reasoning as to why Bertin discloses how an element filters packets according to a source address corresponding to a user. This passage simply describes how the route controller in Bertin calculates optimum paths through the network which satisfy a quality of service specified by the user. This is very different from routing packets according to a source address.

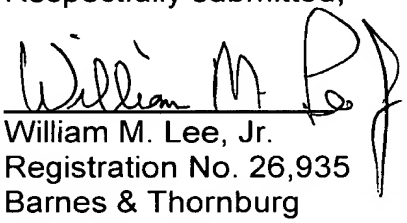
Claim 8 provides a network which corresponds to the method of claim 1 and is considered allowable for the same reasons.

Support for the feature of monitoring a network to determine an *expected* congestion point is supported by the paragraph at page 6 lines 13 to 17.

For the foregoing reasons Applicant respectfully submits that the claims in this application are in condition for allowance. Early issuance of a notice of Allowance is solicited.

April 23, 20003

Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 368-6620
(312) 368-0034 (fax)

ABSTRACT

A priority routing service is provided for a predetermined network user in a connectionless network such as an IP network. The network comprises a plurality of network elements and links therebetween and the express route comprises one or more links between two elements. Elements at each end of the express route are arranged to identify data packets originating from the user and destined for a customer, or to identify data packets originating from a customer and destined for the user, and to divert these packets along the express route. This allows traffic to/from the users to avoid bottlenecks in the network.

Version With Markings To Show Changes Made

In the Specification

Page 9 lines 16-23

As a further alternative, the express route 7 may be implemented using MPLS (Multi Protocol Label Switching) pathways set up for traffic to and from customer B. In the example shown in figure 1, MPLS labels will be used for the path 7 between elements 3x and 3b. The express route 7 differs from normal MPLS routing in that the MPLS pathway is set up for particular priority customers and not between specified nodes or elements within the network. At the start of each MPLS path, methods similar to those described previously are used to select the correct path which is to be used and assign the label to the [patent] packet which guides it along the path.

In the Claims

1. (Amended) A method of operating a connectionless network to provide a priority routing service for traffic between a predetermined [a] network user [having] and a plurality of customers communicating with said user via said network, the network comprising a plurality of network elements and links therebetween, the method comprising:

monitoring said network to determine an actual, or expected, congestion point;

maintaining an express route for carrying said traffic, the express route comprising one or more said links between two end elements which bypasses said congestion point;

identifying, at [least] one or both said end elements, [arranged to identify] data packets originating from said user and destined for a said customer or data packets originating from a said customer and destined for said user, and diverting said packets along said express route.

7. (Amended) A network element for use in a connectionless network comprising a plurality of network elements and links therebetween and an express route for carrying traffic between a predetermined network user and a plurality of customers, the express route comprising one or more links between two end elements which bypasses a congestion point, the network element comprising:

means for routing data packets onto another element dependent on a destination address of said packets[;] and

filter means for identifying and diverting data packets having a source address corresponding to said [a] user, said identified packets being diverted to an element not specified by said routing means and forming part of [an] said express route for said user.

8. (Amended) A connectionless network comprising:

a plurality of network elements and links therebetween;

means for monitoring said network to determine an actual, or expected,

congestion point;

means for maintaining an express route comprising one or more said links between two end elements which bypasses said congestion point;

wherein at least one said end element is arranged to identify data packets originating from a network user and destined for one of a plurality of customers of said user, or data packets originating from a said customer and destined for said user, and [diverting] to divert said packets along said express route.